

REMARKS

To summarize, non-elected Claims 1-13 have been cancelled and Claims 14-17 and 19-30 have been amended. Claims 31-49 have been added. Claims 31-49 are believed to encompass the elected invention.

In the Office Action, Claim 29 is rejected under 35 USC §112, second paragraph, as being indefinite. Claim 29 has been amended to no longer recite the phrase "a second controller". Therefore, withdrawal of the rejection is respectfully requested.

In the Office Action, Claims 14 and 15 stand rejected under 35 USC §103 as being unpatentable over Sakurai, U.S. Patent Pub. No. 2002/0156466 in view of King, U.S. Patent No. 6 359 348.

Sakurai discloses a surgical system having wireless remote controllers 9a, 9b mounted to respective cables of each controllable surgical device 7, 8 for selecting a surgical device for operation by a foot switch unit 4. The remote controllers 9a, 9b shown in Figure 1 transmit signals having a unique controller specific identification signal to a foot switch controller 5. The foot switch controller 5 receives foot switch control signals from foot switch unit 4 and controls the respective surgical devices 7, 8 corresponding to the operated remote controller 9a, 9b. Thus, the remote controllers 9a, 9b of Sakurai that are mounted on the surgical devices only operate to enable/disable control of the respective device by footswitch unit 4.

Paragraph [0036] of Sakurai discloses pressing the pedal A of the foot switch unit 4 to provide ultrasonic vibrations from the scissors hand piece 7. Further, paragraphs [0037] and [0039] state that when pedal B of the foot switch unit 4 is pressed, an operation signal is transmitted to the electric cautery apparatus 3 to output energy to the electrode 8e.

Paragraph [0048] of Sakurai discloses that setting data indicating the correspondence between remote controllers and treating tools, and setting data defining operations to be

performed when the pedals A and B of the foot switch unit 4 are pressed, are input by operating the setting key 28a and are stored in memory 33 of the foot switch controller. Thus, an operator must manually set up the various operating characteristics for the treating tools to be operated.

In conclusion, remote controllers 9a, 9b mounted on the cables 11, 15 of the surgical devices 7, 8 of Sakurai are utilized to select the device to be controlled, while the separate foot switch unit 4 merely actuates or operates the surgical devices.

King discloses a semi-passive keyless entry method and device for use in unlocking the doors of an automobile when the keyless fob is moved within a predetermined range of the automobile. The purpose of the keyless entry system is to enable a person, having their hands unavailable due to carrying groceries or other goods, to open the automobile locks in a hands free mode of operation. Thus, upon approach of the person to the automobile, the doors automatically unlock due to an output from the key fob. In operation, the transmitter, when set, repetitively transmits a wireless signal for a predetermined time period for unlocking the automobile doors or trunk when the key fob is disposed within a predetermined distance.

The Office Action relies on King for the teaching of transmitting control signals wirelessly to gain the advantage of remotely controlling a device from a distance. The Office Action further states that prevention from unnecessary entanglement of wires was well known in the art at the time the invention was made. King does not teach the idea of providing wireless signals to avoid unnecessary entanglement of wires, much less controlling medical devices during an endoscopic procedure. Instead, King merely teaches the idea of eliminating the need for manual control of a key fob to unlock a door or open a trunk of an automobile when approached by the vehicle user.

For the above reasons, Applicants believe there is no motivation to combine King with Sakurai.

Further, there is no motivation, absent Applicants' specification, to modify the features of Sakurai as set forth in the Office Action. The Office Action states that it would have been obvious to modify the foot-operated control console of Sakurai to be wireless. This statement with regard to Sakurai, whether taken alone or in view of King, is not understood. Sakurai already discloses the use of wireless remote control selection devices 9a, 9b mounted to a scissors handpiece 7 and an electric cautery tool 8, respectively. Thus, Sakurai recognizes the benefit of wireless remote control. Instead of providing wireless remote control for the foot switch unit 4, however, Sakurai discloses that wireless control is of value when attached to the hand pieces to enable the foot switch unit. Thus, rather than teaching or disclosing the use of a wireless communication link between a foot switch and control device, Sakurai teaches providing other devices with a wireless transmission link, but not the foot switch itself.

Claim 14 recites a foot-operated control console having a plurality of controls for operation by a foot of an operator including "a selection control to allow the operator to select a medical device" and "a separate device control for manually operating the selected device". As discussed above, in Sakurai, device selection or enablement is provided by remote controllers 9a, 9b that are separate from the foot switch 4. Thus, neither the remote controllers 9a, 9b nor the footswitch 4 in Sakurai have both a selection control and a separate device control.

Further, Applicants' Claim 14 recites a wireless transmitter to transmit a "selection signal" responsive to operation of the selection control and a "device control signal" responsive to operation of the device control. As discussed above, the foot switch 4 of Sakurai provides device control signals to operate the devices over a wired

communication connection. Further, the foot switch 4 has no selection function. Thus, Sakurai does not correspond to the features recited in Claim 14 and there is no motivation to provide the foot switch 4 as a wireless controller by disposing the remote console selection devices 9a, 9b on the foot switch 4, instead of on the devices as shown in Figure 1. As discussed above, King does not cure this deficiency.

For the above reasons Claim 14, and Claim 15 dependent therefrom, are believed allowable.

Claims 16 and 22 stand rejected under 35 USC §103 as being unpatentable over Sakurai in view of King, and further in view of Stephens, U.S. Pat. No. 5 734 254. Claims 16 and 22 depend from what is believed to be an allowable Claim 14, and thus are believed allowable for the reasons set forth above.

Claims 17-19 and 21 stand rejected under 35 USC §103 as being unpatentable over Sakurai in view of King and Stephens, and further in view of Snyder, U.S. Patent No. 6 043 626.

Snyder discloses an auxiliary battery holder with multi-charger functionality that receives a portable electronic device, which is shown as a telephone holder 15 that can be attached to a belt of a user with clip 45. The charger arrangement includes a direct charger connection between an auxiliary battery 40 and a main battery 25.

Claim 17 recites a charging station including "a receptacle to receive the foot-operated control console". Further, Claim 17 recites "an induction coil coupled to a power supply for charging the battery in the foot-operated control console inductively when the foot-operated control console is disposed in the receptacle". This arrangement differs entirely from the direct electrical connection disclosed in Snyder. Further, the charging device of Stephens is not contemplated for use with a receptacle. Modifying Sakurai and Stephens in view of Snyder is believed improper as a secondary reference (Stephens) is further being modified in an attempt to obtain the claimed invention.

For the above reasons, Claim 17 is believed allowable over the applied prior art.

Dependent Claims 18, 19 and 21 are believed allowable for the reasons set forth above with respect to Claim 17.

Claim 20 stands rejected under 35 USC §103 as being unpatentable over Sakurai in view of King, Stephens and Snyder, and further in view of Skowronski, U.S. Patent No. 6 926 130. Claim 20 has been amended to recite different subject matter and therefore the rejection is believed moot.

Claim 20 recites a plurality of foot-operated control consoles and that "each said control console includes a unique console identifier". Sakurai discloses a single foot switch with a wired connection to a controller. Thus a unique console identifier would not provide a function in the Sakurai arrangement. Therefore Claim 20 is believed allowable.

Claims 23 and 24 stand rejected under 35 USC §103 as being unpatentable over Sakurai in view of King, and further in view of Wang, U.S. Patent No. 5 524 180. As discussed above, Sakurai discloses foot pedals A, B for operating respective devices. There is no disclosure of a foot switch for selecting a device to be controlled. Wang discloses a foot pedal 22 that applies force to pressure transducers to move a camera provided with an endoscope to change the image viewable by a surgeon. The foot pedal of Wang controls the position of a surgical instrument.

As best understood, there is no disclosure in Wang of any function other than moving a surgical instrument with a robotic arm. Therefore, there is no motivation to modify the combination of Sakurai and King with Wang to provide both a foot pedal for providing a device control signal and a separate selection control.

For the above reasons, Claims 23 and 24 are believed allowable over Sakurai in view of King and Wang.

Claim 25 stands rejected under 35 USC §103 as being unpatentable over Sakurai in view of King, and further in view of Yaroch, U.S. Patent No. 5 790 065. Claim 25 recites that

"the wireless transmitter is configured to transmit an apparatus identifier in association with the selection signal, the apparatus identifier for associating the foot-operated control console at the receiver unit". Thus, the receiver unit is capable of identifying the specific control console/apparatus providing signals thereto.

The Office Action correctly states that Sakurai does not disclose a controller that transmits a device identifier in association with a plurality of control signals. As discussed above, the foot switch unit 4 of Sakurai merely provides wired control signals from pedals that operate respective devices or handpieces. Thus, an identifier is unnecessary.

Yaroach discloses a remote control entry system that also provides RF signals to an audio system of an automotive vehicle. The system receives a remote control message in response to a selected push button activated on a remote hand carried transmitter and communicates the message via a hard-wire communication link to an audio system to modify audio system parameters.

There is no motivation, absent Applicants' specification, to arbitrarily provide Sakurai with features from the remote control for a vehicle audio system of Yaroach. Further, as discussed above with respect to King, Yaroach does not disclose or suggest changing the basic hard-wired control signals provided by the foot switch pedals of Sakurai to a wireless arrangement, much less a device identifier. One of ordinary skill would not look at Yaroach to provide additional features that are unnecessary for the operation of the hard-wired system of Sakurai. Moreover, in the Office Action, Yaroach further modifies the combination of Sakurai and King to provide a device identifier. This modification is believed improper in that the teachings of the secondary reference to King are further modified by Yaroach in order to attempt to obtain the claimed invention.

For the above reasons, Claim 25 is believed allowable over Sakurai in view of King and Yaroach.

Claim 26 stands rejected under 35 USC §103 as being unpatentable over Sakurai in view of King, and further in view of Linhares, U.S. Patent No. 5 336 218.

Claim 26 is believed allowable for the reasons set forth above with respect to Claim 14. Further, Linhares discloses a surgical smoke evacuator synchronizing system having a suction hose 28 provided with a fluid canister 24 that is attached or mounted to a smoke evacuator housing 30.

The Office Action relies on column 3, lines 27-45 of Linhares for teaching a surgical system with a suction hose attachment that allows a surgical system to be used with different pieces of equipment. In Figure 1, Linhares discloses a separate surgical laser system 10 having a power supply and a control panel 14. A monitoring system 50 interconnects the laser 10 and smoke evacuator 22. There is, however, no disclosure or suggestion of the laser 10 of Linhares having a suction hose 28 attached thereto, much less a "foot-operated" control console having an attachment to allow a suction hose to be attached to the housing thereof. Therefore, even if Linhares were combined with Sakurai and King, which Applicants disagree with, the combined references would not result in the claimed invention.

For the above reasons, Claim 26 is believed allowable over Sakurai in view of King, and further in view of Linhares.

Claims 27 and 29 stand rejected under 35 USC §103 as being unpatentable over Sakurai in view of Wang, King and Stephens. As discussed above with respect to Claim 14, there is believed to be no motivation to combine Sakurai with King, much less in order to obtain Applicants' arrangement of Claim 27.

Independent Claim 27 recites an apparatus comprising a housing designed to be situated on a floor surface, a plurality of controls within the housing designed to be operated by a foot of the operator "to control the plurality of medical devices, the plurality of controls including a plurality of foot pedals and a plurality of foot switches".

Claim 27 further recites "the plurality of foot switches including a selection switch for selecting a medical device to be controlled from among the plurality of medical devices". As discussed above, the combination of Sakurai, Wang, King and Stephens does not disclose a foot-operated control for selecting a medical device to be controlled. Instead, Sakurai discloses remote controllers mounted to the devices which are used to select the device to be controlled. Further, Sakurai does not include any selection switches disposed with the foot pedals A, B on the foot switch.

Moreover, Applicants' Claim 27 recites a wireless transmitter within the housing, to transmit "a device selection signal" to select a device to be controlled and to transmit "control signals to cause the remote receiver unit to control the selected medical device in response to operation of the controls". As discussed above, Sakurai does not disclose providing a wireless signal, much less both a device selection signal in combination with control signals from the foot switch 4 to a remote receiver unit that controls a selected medical device.

As discussed above, Wang discloses moving a robotic arm that supports an endoscope. Thus, Applicants believe the rejection set forth at the first paragraph at page 13 of the Office Action is erroneous in that Wang does not appear to include a selection switch to select a specific device to be controlled among a plurality of medical devices, but instead merely functions to move a robotic arm.

Claim 29 recites the remote receiver unit including "a data communication device to transmit a second plurality of control signals based on the first plurality of control signals, to the selected medical device over a wireless communication medium". As illustrated in Figure 1 of Sakurai, besides the foot switch 4 being in wired communication with the foot switch controller 5, the foot switch controller 5 is in wired communication with both the ultrasonic generator 2

and the electric cautery apparatus 3. King and Stephens do not disclose this feature.

For the above reasons Claim 27, and Claim 29 dependent therefrom, are believed allowable over the combination of Sakurai, Wang, King and Stephens.

Claim 28 stands rejected under 35 USC §103 as being unpatentable over Sakurai in view of Wang, King and Stephens as applied to Claim 27, and further in view of Yaroch. Claim 28 is believed allowable for the reasons set forth above with respect to Claim 27. Further, Claim 28 is believed allowable for the reasons discussed above with respect to Claim 25.

Added Claims 31-49 are believed allowable as presented. For example, independent Claim 31 recites a system for controlling a plurality of medical devices including a wireless foot-operated control console having a selection control switch for manually selecting a medical device to be controlled and at least one control pedal for manually controlling the selected medical device, "the foot-operated control console including a wireless transmitter for wirelessly transmitting a medical device selection signal provided by the selection control switch and for wirelessly transmitting medical device control signals provided by the control pedal". As discussed above, Sakurai discloses a foot switch unit 4 that only provides control signals from pedals A, B that are used to control respective devices or hand pieces 7, 8. There is no disclosure or suggestion of providing the foot-operated switch unit 4 with a control switch for providing a medical device selection signal. Further, the foot switch unit 4 of Sakurai is in wired communication with the foot switch controller 5. Therefore independent Claim 31, and Claims 32-38 dependent therefrom, are believed allowable.

Claim 39 depends from Claim 27 and is believed allowable for the reasons set forth above with respect to Claim 27.

Independent Claim 40 recites a system for manually controlling a plurality of medical devices including a foot-

operated control console. The control console has a plurality of controls for operation by the foot of an operator including "a selection control for manual selection of a medical device" and "a separate device control for manually operating the selected medical device". Claim 40 also recites the control console including a wireless transmitter. These features are believed to distinguish over the prior art for reasons discussed above with respect to Claim 14.

Claim 40 additionally recites that the foot-operated control console includes a "wireless receiver for receiving wireless signals from another device and providing the wireless signals to said controller". There is no disclosure of a wireless receiver in the foot switch unit 4 of Sakurai. Further, the prior art is not believed to disclose a control console including both a wireless transmitter and a wireless receiver.

For the above reasons, Claim 40 is believed allowable over the prior art.

Claims 41-49 depend from what is believed to be an allowable Claim 40, and recite additional features not believed present in the prior art. For example, Claim 44 recites a receiver unit that synchronizes with the console. This synchronization function clearly is not present in the wired connection of Sakurai, and is not believed present in the prior art of record.

Claim 45 recites that the receiver unit comprises a synch button and that actuation of the synch button and at least two switches on the console synchronizes the receiver unit with the console. This feature is not believed present in the prior art.

Claim 46 recites that the console includes a unique console identifier. This feature is not believed present in the prior art of record.


Claim 47 recites that the wireless transmitter and wireless receiver of the console comprise a "transceiver". As discussed above with respect to Claim 40, the prior art is not

believed to provide both a wireless transmitter and wireless receiver in a foot-operated control console, much less as a transceiver therein.

Claim 49 recites that the wireless receiver of the foot-operated control console receives "information for modifying parameters or settings of the foot-operated control console". This feature is not believed present in the prior art of record.

In view of the above, the instant application is believed to be in condition for allowance, and action toward that end is respectfully solicited.

Respectfully submitted,



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